

Attorney Docket No. 2003B086

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REMARKS/ARGUMENTS**Claim Status – Request for Reconsideration**

Reconsideration of this application is requested. The claims submitted for reconsideration are claims 61-105.

Election/Restrictions

Claims 1-60 have been canceled in response to the restriction requirement. Applicants reserve the right to pursue the subject matter of those claims by way of a divisional application.

Claim Rejections – 35 USC § 112

The claims were rejected under 35 USC § 112, second paragraph as being indefinite. Specifically, the phrase “the gaseous products and entrained catalyst” of step (c), as stated in claims 61 and 82, was considered to lack antecedent basis. This rejection is traversed and reconsideration requested.

Applicants note that step (b) of both claims refers to “forming gaseous products.” The term in step (c) “the gaseous products” refers back to the gaseous products formed in step (b). The term “entrained catalyst,” however, is not preceded by the term “the.” Therefore, it does not refer back to any term, and it is intended to stand on its own. Thus, it is a term that is newly presented in step (c) and does not need an antecedent. Accordingly, the rejection is believed to be in error.

Claim Rejections – 35 USC § 103

Claims 61-75, 81-99 and 105 stand rejected under 35 U.S.C. § 103(a) as being allegedly obvious over Walters (U.S. Patent No. 4,786,622). This rejection is traversed and reconsideration requested.

This invention is directed to a process for regenerating catalyst. In one embodiment, coked catalyst is contacted with a regeneration medium in a regeneration zone at a first superficial velocity to convert at least a portion of the coked catalyst to regenerated catalyst and also forming gaseous products. The gaseous products are directed along with entrained catalyst from the regeneration zone to a separation zone such that the entrained catalyst flows

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in the separation zone at a second superficial velocity, and the ratio of the first superficial velocity to the second superficial velocity is at least 1.2.

Walters discloses a regenerator particularly suited to fluid catalytic cracking applications. Although it was indicated in the office action that the Walters regenerator lowers the concentration of particles in the flue gas to 0.2 lbs/ft³ or less, this assertion is incorrect. More correctly, Walters lowers the concentration of particles in the flue gas to 0.2 to 0.5 lbs/ft³. It was, however, correctly pointed out in the office action that Walters fails to disclose a ratio of space velocity in the regeneration zone to the space velocity in the separation zone of at least 1.2. Nevertheless, this difference was considered an obvious difference.

Applicants respectfully point out that Walters' regeneration zone is referred to as coke combustion chamber 2. At the lower portion of that chamber, the catalyst density is from 3 to 35 lbs/ft³. Gas and entrained catalyst travels in an upward direction and passes through a conduit 4 and into a second vessel or chamber 6, where initial separation occurs. Flue gas is passed through a conduit 32 and ultimately leaves through a conduit 38 and a conduit 48. The catalyst density of the flue gas 0.2 to 0.5 lbs/ft³, and the catalyst density in conduit 4 and the upper portion of the second vessel or chamber 6 is 1 to 5 lbs/ft³. As clearly shown in the Figure of the Walters patent, the bottom portion of the regenerator has a larger diameter than the upper portion where the catalyst is separated. This means that separation zone has a much greater superficial velocity than in the regeneration zone, which is exactly the opposite of this invention. Therefore, the Walters regeneration teaches away from the decreased space velocity regime of Applicants' claimed invention. Accordingly, Walters fails to disclose or suggest the claimed invention.

Claims 76-80 and 100-104 were rejected under 35 U.S.C. § 103(a) as being allegedly obvious over Walters in view of Lattner (U.S. Patent 6,023,005). This rejection is traversed and reconsideration requested.

The Lattner reference was cited for disclosing a methanol-to-olefin process. However, Lattner, like Walters, fails to disclose the decreased space velocity regime of Applicants' claimed invention. Instead, Lattner is directed to controlling regeneration and recycle of non-regenerated catalyst so that a mix of partially regenerated catalyst contacts the methanol feed. The ratio of superficial velocities in the regeneration and separation sections

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of the regenerator is not addressed by Lattner. Accordingly, the combination of Walters and Lattner fails to suggest the claimed invention.

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CONCLUSION

Having demonstrated that the cited references fail to disclose or suggest the invention as claimed, this application is in condition for allowance. Accordingly, Applicants request early and favorable reconsideration in the form of a Notice of Allowance.


If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated, since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response. Please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1712 (Docket #: 2003B086).

Respectfully submitted,

Date:

10/20/06


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